



COURSE ID 2486

# Skin Biochemistry: Epigenetics, Gene Expression and Epidermal Enzymes

DIRECTED BY

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ACCREDITED  
COURSE

- Function and structure of genes
- Importance of the biorhythms
- Triggers to the inflammatory process

## about the course

Skincare products are designed to modify the surface of the skin for both aesthetic and protective purposes, and changes to the skin's environment can have a positive impact on its biochemical properties. Innovative concepts and products can be developed by understanding gene expression and epigenetics.

In this 90-minute accredited training, participants will learn about the human genome, the structure and function of genes, and how they are expressed, with a focus on constitutive and inducible genes. The training will also cover the expression "products" of genes, such as stress proteins, cytokines, receptors, and enzymes, and their involvement in the inflammatory process. The last module will concentrate on the impact of gene expression control on biorhythms and gender-linked differences in skin, as well as providing examples of the epigenetic control of skin properties.

Experience top-notch training LIVE from an industry expert that goes beyond traditional lectures. You will engage in an interactive and stimulating learning experience that will help develop the skills needed to excel in the field.

Those attending the LIVE training event must have a webcam on their computer equipped with a microphone and speakers/headset to fully participate.

Maximize Learning! Take this Course and Its Companion Courses:

- Skin Biochemistry: Epidermis and Dermis Cells and Skin Types | **course ID# 2485**
- Skin Biochemistry: The Skin Microbiome | **course ID# 2487**

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## who should attend

This course is intended for professionals in the cosmetic and personal care industry, pharmaceutical skin care and skin care-related medical devices. It will be especially valuable for:

- Professionals with a background in Physics and Chemistry who wish to strengthen their knowledge in biology
- Marketing/ Sales/ Production/ QC/QA/ Regulatory
- Formulation chemists

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## learning objectives

**Upon completion of this course, you will be able to:**

- Explain the function and structure of genes and their mode of expression
- List and describe the major gene products that are responsible for proper functioning and communication within the epidermis, as well as to trigger the inflammatory process
- Discuss the importance of the biorhythms and of the skin characteristics which are linked to the gender

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## course outline

### Review of Learning Objectives

#### Module 1:

##### Differentiation/Epigenetics

- Control of gene expression
- Gene products: Proteins and peptides

#### Module 2:

##### Description of some inducible genes

- Heat shock proteins
- Cytokines
- Receptors
- Enzymes

#### Module 3:

- Gender-linked differences in skin
- Biorhythms
- Possible epigenetic interventions

### Question and Answer Session

### Assessment Opportunity

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## course instructor

**Dr. Paolo Giacomo**ni is an independent consultant to the Skin Care industry. He is a quality-focused leader with over 25 years of experience in product research and development for cosmetic product providers. He is presently Head of R&D with L-Raphael, Geneva, Switzerland. He was Chief Scientific Officer of Elan Rose International. He served as VP of Skin Care World Wide R&D with Herbalife. He was Executive Director R&D with Estee Lauder and served as scientific spokesperson for Clinique. During his tenure at L'Oreal he served as Head of the Department of Biology and then as scientific attaché to the Director of Applied Research. In his academic years, he was Maître de Conférences at the University of Paris, France, and Visiting Professor at the University of Milano, Italy.

Dr. Giacomo has been Editor-in-Chief of the Journal of Cosmetic Science for the years 2017-2020.

Dr. Giacomo is fluent in French, Italian, German, Spanish and English and is the author of 100+ publications and patents representing breakthrough industry concepts. He received his Ph.D., in Biochemistry from UNIVERSITY OF PARIS, Paris France; his Master's Degree in Atomic Physics from UNIVERSITY OF MILANO, Milano, Italy and has had Post-Doctoral Training at Deutsches Krebsforschungszentrum at Heidelberg, Germany, at the University of Wisconsin, Madison, WI and at the University of California, San Diego, CA.

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## Accreditations



### **International Accreditors for Continuing Education and Training (IACET)**

Cobblestone has been approved as a CEU Accreditor by IACET and awards CEUs for participation in qualified courses. Cobblestone has demonstrated that it complies with the ANSI/IACET Standards and is authorized to offer IACET CEUs for its programs. CEUs will be awarded for participation in Cobblestone's courses at the rate of .1 CEU per contact hour upon successful completion of the entire course and 70% accuracy in the required Learners' Assessment. A minimum score of 80% is required for all courses within a Cobblestone Certification Program. This course offers a total of 1.5 contact hours or .2CEUs. For further information, visit [www.iacet.org](http://www.iacet.org)